

COVER & SEAL

Freudenberg Sealing Technologies offers its customers tailor-made and function-optimized integrated precision seals – **Cover & Seals**. These parts are used in customer-specific applications with complex requirements. Modern thermoplastic technology is used with other core competencies from FST, the elastomer and sealing technology. The carrier material is usually made of a thermoplastic chemically or mechanically bonded to a soft component.

The technology can be roughly described with the rewritten term “2K+” technology. The “+” stands for the additional integration of other elements, e.g. metal parts or other components.

Freudenberg Sealing Technologies uses simultaneous manufacturing processes that – connected with high automation and process reliability – ensure the excellent quality of the products. In doing so, a product range from small to medium sized geometries up to 400mm in length and width and in the weight range from 0.05 to 1500 grams/part can be covered.

FEATURES & BENEFITS

- Integration of additional functions e.g. clips, etc.
- Overmolding process e.g. metal bushings, etc.
- Highest reproducibility
- Highest dimensional precision of complex parts
- Application driven optimized and customized material selection

Application examples

Housings/Frames/Carriers/Covers e.g. for:

- Mechatronic systems
- Sensor systems
- Inverter systems
- Battery systems



The information contained herein is believed to be reliable, but no representation, guarantees or warranties of any kind are made to its accuracy or suitability for any purpose. The information presented herein is based on laboratory testing and does not necessarily indicate end product performance. Full scale testing and end product performance are the responsibility of the user.

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VALUES FOR THE CUSTOMER

- Less assembly efforts through function integration and direct bonding
- Reduced product cost due to direct bonding of static and/or dynamic sealing
- Sealing integration with most complex designs
- Development of sealing designs
- Great design freedom for complex parts by 2K+ technology
- End-of-line continuous process control through testing
- Weight reduction - replacement of metal components by thermoplastic carrier
- Integration of electromagnetic radiation protection (EMI-Shielding) possible – Shield & Seal
- Additional function (heat dissipation) by using TIM (Freudenberg customized thermal interface materials) in combination with Cover & Seal

MATERIALS

Property	Result
Carrier Material	thermoplastic (e.g. PA, PBT, PPA, PPS), metal (e.g. aluminium)
Sealing Material	high performance Freudenberg-elastomers (e.g. AEM, FKM, EPDM), silicone (LSR, HTV), TPE
Other components	e.g. overmolded or press-in compression limiter